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## **Perpetrators, Victims, and Observers of Violence: Chronic and Non-Chronic Drug Users**

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*The purposes of this analysis were (a) to compare the prevalence of violence among a sample of chronic drug users (CDUs) and non-chronic drug users (NCDUs) in Miami-Dade County, Florida, and (b) to determine the level of risk of becoming a victim, perpetrator, or observer of violence if one uses drugs. In interviews, 1,479 CDUs and NCDUs provided information about their experiences with violence. CDUs were significantly more likely than NCDUs to have perpetrated all violent acts. However, CDUs were also significantly more likely than NCDUs to have been the victim or observer of violent acts as well. This finding should shift our views of CDUs to include the latter roles. Specific intervention strategies are recommended to facilitate violence reduction in this population.*

## ***Perpetrators, Victims, and Observers of Violence Chronic and Non-Chronic Drug Users***

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***Violence and drug abuse*** are currently recognized as major public health problems in the United States. Violence may erupt from a variety of situations involving illicit drugs, such as disputes over splitting drugs; robbery for drugs or money; disputes among rival distributors; property crimes committed to raise drug money; punishment for poor drug quality; attacks on police, informants, or witnesses; and the infiltration of older, well-established drug markets by newer dealers (Reiss & Roth, 1993; Roth, 1994). Although drug use is a major factor involved in many different types of violent acts, the National Academy of Science Violence Report states, "The link among alcohol, other psychoactive drugs, and violence turns out to be not an example of straightforward causation, but rather a network of interacting processes and feedback loops" (Reiss & Roth, 1993, p. 183).

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Determining a cause and effect relationship between drug use and violence has been problematic for several reasons. For example, the systemic model of drug use and crime theorizes that drug use is an underlying causal factor of criminal activity (Goldstein, 1985), yet others hypothesize that a criminal lifestyle induces experimentation with illicit drugs, which may ultimately lead to substance abuse (Chaiken & Chaiken, 1990). Although there is a consistent correlation reported in the literature between drug use and violence, most studies emphasize that evidence of causality is often limited by the data available for analysis (Chaiken & Chaiken, 1990; Fagan, 1990; Johnson & Belfer, 1995; Nurco, Kinlock, & Hanlon, 1995). The etiology of drug use and violence is complicated and often difficult to measure. For example, both drug use and violence may be a result of low socioeconomic status, the absence of a solid familial structure (Chaiken & Chaiken, 1990; Zhang, 1997), or acculturation (Caetano, Schafer, Clark, Cunradi, & Raspberry, 2000; King, Polednak, Bendel, & Hovey, 1999; Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998). Furthermore, many published studies on the drug-violence relationship have used population samples in drug treatment or criminal justice system settings, creating biases that do not allow for generalization to a larger population of out-of-treatment chronic drug users (CDUs).

Despite these conflicts, research supported by the National Institute of Justice (NIJ) and others has repeatedly found strong correlations between violence and illicit drug use (Chaiken & Chaiken, 1990; Dawkins, 1997; Inciardi & Pottieger, 1994). Criminals who use illegal drugs commit robberies and assaults more frequently than do nonuser criminals, and they commit them especially frequently during periods of heavy drug use (U.S. Bureau of Justice Statistics, 1992). According to the 1991 joint survey of federal and state prison inmates, both federal and state prisoners reported being under the influence of drugs at the time of committing the offense and also reported committing crimes to get money to buy drugs (U.S. Bureau of Justice Statistics, 1991). This is consistent with reports from the Federal Bureau of Investigation (U.S. Department of Justice, FBI, 1996) and others showing that many crime victims believed their perpetrators were under the influence of illicit drugs or alcohol when the crime was committed (U.S. Bureau of Justice Statistics, 1997). In addition, Goldstein (1993) reported that more than one half of all homicides in New York were drug related, and one third were specifically involved with crack cocaine. The NIJ Drug Use Forecasting (DUF) program, which tested for drug use among booked arrestees in 24 sites nationwide, found more than half of arrestees booked for violent crimes were confirmed by laboratory tests to have used at least one illegal drug in the hours before their arrest (Roth, 1992).



Some literature has indicated that certain groups experience violence victimization more than others (Fattah, 1993; McElrath, Chitwood, & Comerford, 1997). For example, those individuals who engage in criminal activity as perpetrators also experience a higher rate of victimization than those who are not involved in criminal activity (Lauritsen, Sampson, & Laub, 1991). Drug users have been identified as one of the groups with higher rates of victimization (Goldstein, 1991; Inciardi, Lockwood, & Pottieger, 1993; Maher & Curtis, 1995). Cocaine use has been associated with victimization by violent activity (Goldstein, 1991), as one study reported evidence of cocaine in almost one third of homicide victims (Tardiff et al., 1994). Others have reported that crime victimization rates are much higher among injection drug users than rates found for the general urban population (McElrath et al., 1997). It has been suggested that individuals who use illicit drugs are often seen as easy targets because of their impaired judgment and reflexes as a direct result of the drugs' psychopharmaceutical effects (Goldstein, 1991). Drug users may also be attractive targets because it is believed that they are carrying drugs or money, particularly in areas where drugs are known to be bought and sold (McElrath et al., 1997).

Certain demographic variables have also been found to be linked to experiences with violence. For example, studies have reported that males are more likely than females to be victims of assault (Kennedy & Forde, 1990; Lauritsen et al., 1991), larceny, and vandalism (Lauritsen et al., 1991), and females are significantly more likely than males to be robbed. Yet, other studies show a decreased relationship between gender and victimization when crime involvement is controlled (Jensen & Brownfield, 1986; Lauritsen et al., 1991).

The literature reports mixed findings concerning the relationship between violence and race or ethnicity. For example, the U.S. Bureau of Justice Statistics (1996) reported that Blacks and Hispanics are the victims of violence more often than Whites, but other studies report this trend only for certain crimes (Lauritsen et al., 1991).

The literature also reports mixed findings concerning the relationship between experiences with violence and age. The U.S. Bureau of Justice Statistics (1996) reports that younger rather than older individuals are the victims of violence. However, as with race, the type of crime seems to play a significant role in this relationship. For example, one study reported an inverse relationship between assault and age but found no relationship between burglary or theft and age (Miethe & Meier, 1990).

Finally, although low socioeconomic status is often reported to be associated with an increased risk for exposure to violence, when education level is



teased out of the equation, the findings are mixed. For example, one study reported that being better educated was associated with an increased risk of violence among pregnant women (Gielen, O'Campo, Faden, Kass, & Xue, 1994). Other studies show that education is protective for females (Grisso et al., 1999) but not for males (Borowsky, Hogan, & Ireland, 1997).

Although the literature consistently supports a strong association between drug use and violence, very few studies support this link within a theoretical framework. Goldstein (1985) has offered a tripartite conceptual framework that characterizes drug-related violence as involving psychopharmacological, economically compulsive, and systemic aspects of the relationship between drugs and violence. The systemic aspect of Goldstein's model refers to violence that is a subcultural behavior pattern endemic to the illicit drug user population, such as killing someone for distributing bad drugs. The psychopharmacological aspect suggests that individuals act in violent ways as a direct result of the ingested drug. For example, violent acts may result from heroin withdrawal. The economically compulsive model suggests that violence is committed to obtain money to purchase more drugs.

Within Goldstein's theoretical framework, the main purposes of this analysis were (a) to compare the prevalence of physical and sexual violence among a sample of CDUs and non-chronic drug users (NCDUs) in Miami, Florida, and (b) to determine the differences between CDUs and NCDUs in terms of being perpetrators, victims, and observers of violence. It was hypothesized that CDUs would be perpetrators of violence more often than NCDUs and that NCDUs would be victims of violence more often than CDUs.

## METHOD

From April 1996 to September 1997, a two-stage stratified sample of 1,479 CDUs and NCDUs ages 18 years and older were recruited using street outreach and a network-based (snowball) technique in Miami-Dade County, Florida. This outreach technique consists of project staff recruiting their contacts within the CDU community, who then in turn recruit their friends for potential study participation. The University of Miami Comprehensive Drug Research Center's outreach staff have more than 15 years of experience in network-based outreach technique through previous studies and are very familiar with the drug-using community and its members in the greater Miami area. Because of this solid rapport, the refusal rate for study participation on the street is very low. NCDUs were selected from the same neighbor-



hoods as CDUs to provide a comparison group with a similar socioeconomic background. A tri-ethnic sample of non-Hispanic White, African American, and Hispanic men and women was recruited from each of the drug-use subgroups.

The two distinct subsamples of participants selected for inclusion in the study were active CDUs and NCDUs. Active CDUs were those participants who had used cocaine and/or opiates on at least a weekly basis for the previous 12 months and tested positive on a urine screen for cocaine and/or opiates. NCDUs had never used cocaine or opiates, had no visible track marks, and tested negative for cocaine and opiates. NCDUs may have used marijuana or other drugs. The criterion for CDUs, which was weekly or more frequent use of cocaine and/or opiates for at least 1 year, is consistent with the frequency of use criterion used by the Office of the National Drug Control Policy (ONDCP) in their standard definition of chronic drug use (ONDCP, 1997).

### **Instruments**

After initial contact and preliminary screening with a street outreach worker, potential participants were transported to an assessment center where a more thorough screening was performed. Drug use status was established by interview and confirmatory urine screen, using Abuscreen ONTRAK Assay, and injection status was verified by physical examination for scarring or tracks. The study was explained to the eligible participants, and informed consent was obtained. The University of Miami Health Services Research Instrument (HSRI) was administered to each participant by a trained interviewer. Most items in the questionnaire were from reliable national utilization surveys. The face-to-face structured interview took about 1 to 1½ hours to complete and included demographic information, a drug use history, lifetime and 12-month health histories, and information on experiences with violence. Violence experienced and observed in the participant's lifetime and in the previous 12 months was assessed. Participants were required to be sufficiently sober during the interview so they would be alert and coherent. Because potential CDU participants were urine screened only minutes before their interview and were required to test positive to participate, it is very likely that many participants were in fact under the influence of drugs when the interview began. Previous reliability and validity tests (Weatherby et al., 1994) give us considerable confidence that their levels of sobriety did not affect the study results.



## Measures

In terms of violence questions, the interviewer specifically asked the following: Other than in military combat situations have you ever seen someone beaten up, shot or stabbed, robbed, killed, or sexually assaulted/raped? Did this occur in the past 12 months? Have you ever been beaten up, shot or stabbed, robbed, killed, or sexually assaulted/raped? How many times did this occur in the past 12 months? Have you ever beaten up, shot or stabbed, robbed, killed, or sexually assaulted/raped somebody? How many times did this occur in the past 12 months?

Assault is operationally defined as being "beaten up." An observer was defined as someone who had ever seen someone being beaten, robbed, shot, killed, or raped. A perpetrator was defined as someone who had ever beaten, robbed, shot, killed, or raped another person, and a victim was defined as someone who had ever been beaten, robbed, shot, or raped. Murders were operationally defined as completed acts; attempted murders were not included. Sexual assault/rape is also operationally defined as the completed act and not an attempt. A robbery was operationally defined as having one's personal property stolen, whether it was on the person's body at the time of the act or not.

As stated previously, the literature has found inconsistent results in terms of how certain demographic variables affect experiences with violence, namely gender, race/ethnicity, and age. This article included these variables for further analysis concerning how they may affect experiences with violence. The actual interview questions were as follows: Do you consider yourself Black, White, Hispanic (or Latino), Asian, Native American, or another race? Choice of answers were Black (not of Hispanic origin), White (not of Hispanic origin), Hispanic/Latino, Asian (or Pacific Islander), Native American (American Indian) or Alaskan native, or other. Age was asked by first asking the date of birth and then asking, How old are you? Education was defined by asking, What is the highest grade or year that you have completed in school? The responses included no schooling, all elementary school grades (1st through 8th grades), all high school grades (9th through 12th grade), and all college/technical school years (freshman through completed graduate school). Participants are then asked, Do you have a high school diploma? If the answer was no, they were asked, Do you have a GED? Living arrangements, whether living in one's own house, apartment or using others (hotel, live with someone else, halfway house, shelter, etc.) had been found in previous studies to vary by gender and to suggest differences in protective versus destructive behaviors (Metsch et al., 1998).



The variable "ever been arrested" includes participants who had ever been arrested at any time during their lifetime.

All participants were paid \$20 once they completed the interview. This study was approved by the Institutional Review Board of the University of Miami School of Medicine.

### Statistical Analysis

Demographic characteristics of CDUs and NCDUs as observers, perpetrators, or victims of violence and other bivariate relationships were examined separately using chi-square or *t* tests. Chi-square tests were used to examine the strength of association among gender, drug use group, and other categorical variables measuring demographic characteristics of CDUs and NCDUs as observers, perpetrators, or victims of violence. For continuous variables, such as number of violent acts in the previous 12 months, *t* tests were used for differences in means among the groups. Logistic regression was used for multivariate analyses that assessed the relationship between drug use status (CDUs versus NCDUs) when controlling for other factors that were related to violence. The dependent variables were whether or not the participant had ever been an observer, a perpetrator, or a victim of violence.

## RESULTS

The results comparing demographic characteristics by CDU or NCDU and by observer, perpetrator, or victim are presented in Tables 1 and 2. Among CDUs (Table 1), a significantly higher percentage of males than females had ever been observers ( $p \leq .001$ ) and perpetrators ( $p \leq .001$ ) of violence. When each race/ethnic group was compared with all others, it was found that White CDUs were significantly more likely ( $p \leq .001$ ) to be victims, and Hispanics were less likely than others to be either observers ( $p < .05$ ), perpetrators ( $p < .01$ ), or victims ( $p \leq .001$ ) of violence. There were no significant differences by age, education, and living arrangements among CDU observers, perpetrators, and victims. Unmarried participants were more likely to be observers ( $p < .05$ ).

A comparison of demographic characteristics among NCDUs (Table 2) found similar results. Again, males were significantly more likely than females to be observers ( $p \leq .001$ ) and perpetrators ( $p \leq .001$ ) of violence. Also, as with CDUs, Blacks were significantly more likely to be observers ( $p \leq .001$ ) and perpetrators ( $p \leq .001$ ), Whites were significantly more likely



**TABLE 1: Comparison of Demographic Characteristics of Chronic Drug Users (CDUs) (*N* = 925) as Observers, Perpetrators, and Victims of Violence**

	<i>Percentage of Observers (n = 863)</i>	<i>Percentage of Perpetrators (n = 569)</i>	<i>Percentage of Victims (n = 762)</i>
Number of violent acts (mean)			
Gender			
Male ( <i>n</i> = 549)	95.1***	68.9***	83.8
Female ( <i>n</i> = 376)	88.3	50.8	80.3
Race/ethnicity			
Black ( <i>n</i> = 361)	93.6	65.7*	82.0
Hispanic ( <i>n</i> = 298)	88.3	55.0	75.5
White ( <i>n</i> = 265)	95.1	63.0	90.6***
Age (means) <sup>a</sup>	37.4 (37.3)	37.0 (38.0)	37.5 (37.0)
Education			
High school GED+ ( <i>n</i> = 546)	92.9	61.5	83.2
Less than GED ( <i>n</i> = 379)	91.6	61.5	81.3
Marital status			
Married ( <i>n</i> = 171)	87.1	63.2	82.5
Not married ( <i>n</i> = 755)	93.5*	61.1	82.4
Living arrangement			
Own house/apartment ( <i>n</i> = 203)	90.2	57.6	78.8
Other ( <i>n</i> = 722)	92.9	62.6	83.4

a. In the age data, the numbers in parentheses represent the mean age of nonobservers, nonperpetrators, and nonvictims.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .

to be victims ( $p < .01$ ), and Hispanics were significantly less likely to be observers ( $p \leq .001$ ), perpetrators ( $p \leq .001$ ), and victims ( $p < .05$ ). Unlike the case with CDUs, however, younger NCDUs were significantly more likely than older ones to be observers ( $p \leq .001$ ) or perpetrators ( $p \leq .001$ ) of violence, and those who were married were less likely to be victims ( $p < .05$ ). NCDUs who lived in unstable living arrangements were significantly more likely to be observers ( $p < .05$ ), victims ( $p < .05$ ), or perpetrators ( $p \leq .001$ ) of violence than those who lived in stable living conditions (their own house or apartment). Overall, compared to CDUs, both male and female NCDUs reported fewer instances of ever being observers, victims, or perpetrators of violence.

With demographic factors controlled, logistic regression models indicated that being a CDU was a significant ( $p < .01$ ) predictor of ever having been an observer (Table 3), perpetrator (Table 4), or victim (Table 5) for all of the violent acts examined, except as a perpetrator of rape (Table 4). CDUs

**TABLE 2: Comparison of Demographic Characteristics of Non-Chronic Drug Users (NCDUs) (*N* = 553) as Observers, Perpetrators, and Victims of Violence**

	<i>Percentage of Observers (n = 432)</i>	<i>Percentage of Perpetrators (n = 183)</i>	<i>Percentage of Victims (n = 378)</i>
Number of violent acts (mean)			
Gender			
Male ( <i>n</i> = 296)	85.8***	43.2***	66.2
Female ( <i>n</i> = 257)	67.7	21.4	70.3
Race/ethnicity			
Black ( <i>n</i> = 195)	90.8***	49.2***	66.7
Hispanic ( <i>n</i> = 183)	63.4	16.4	61.8
White ( <i>n</i> = 175)	77.1	32.6	77.1**
Age (means) <sup>a</sup>	36.3 (40.6)	34.2 (38.7)***	37.2 (37.3)
Education			
High school GED+ ( <i>n</i> = 353)	77.5	34.6	69.7
Less than GED ( <i>n</i> = 211)	77.3	30.5	66.0
Marital status			
Married ( <i>n</i> = 94)	71.3	25.5	59.5
Not married ( <i>n</i> = 459)	79.7	34.6	70.2
Living arrangement			
Own house/apartment ( <i>n</i> = 168)	70.2	21.3	60.7
Other ( <i>n</i> = 385)	80.5*	38.2***	71.7*

a. In the age data, the numbers in parentheses represent the mean age of nonobservers, nonperpetrators, and nonvictims.

\* $p \leq .05$ . \*\* $p < .01$ . \*\*\* $p \leq .001$ .

were also more likely than NCDUs to have ever been arrested ( $p < .001$ ) (Table 4). These results were similar for both the previous 12 months (results not presented in tables) and lifetime.

Other significant predictors of violence include gender, race, age, education, and living arrangement. Males (CDUs and NCDUs combined) were significantly more likely than females to be observers (Table 3) or perpetrators (Table 4) of a beating, shooting, robbery, or rape ( $p < .05$ ) and were more likely to have been arrested ( $p < .01$ ). Males were also more likely to have been shot ( $p \leq .001$ ), but females were more likely to have been the victims of rape ( $p \leq .001$ ) (Table 5).

Younger participants were more likely to have observed a beating ( $p < .001$ ) (Table 3); to have beaten someone ( $p < .001$ ), robbed someone ( $p < .01$ ), raped someone ( $p < .05$ ); to have been arrested ( $p < .05$ ), or to have been raped ( $p < .01$ ) (Table 4), whereas older participants were more likely to have been

(text continues on p. 902)



TABLE 3: Logistic Regression Model: As Observers of Violence (N = 1,478)

	Ever Seen Someone Beaten (n = 1,205)		Ever Seen Someone Shot (n = 773)		Ever Seen Someone Robbed (n = 899)		Ever Seen Someone Killed (n = 588)		Ever Seen Someone Raped (n = 154)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Chronic drug users										
(versus non-chronic drug users)	2.66***	2.00-3.54	2.55***	2.04-3.19	3.32***	2.64-4.19	2.02***	1.61-2.54	2.91***	1.90-4.46
Male (versus female)	3.07***	2.26-4.14	2.28***	1.81-2.87	2.77***	2.18-3.53	2.17***	1.72-2.74	0.88	0.62-1.27
Age (by years)	0.97***	0.96-0.99	0.99	0.98-1.00	0.99	0.98-1.00	0.99	0.98-1.01	0.99	0.97-1.01
Black (versus White)	1.45	0.99-2.12	1.85***	1.42-2.41	1.30*	0.98-1.72	1.88***	1.44-2.46	1.17	0.79-1.74
Hispanic (versus White)	0.40***	0.29-0.57	1.08	0.82-1.42	0.52***	0.39-0.69	1.21	0.91-1.60	0.66*	0.42-1.05
Married (versus not married)	0.84	0.59-1.20	1.05	0.78-1.40	0.97	0.72-1.32	1.07	0.80-1.44	1.25	0.81-1.95
Lives in own house										
(versus elsewhere)	0.90	0.65-1.25	1.00	0.77-1.30	1.04	0.79-1.37	1.25	0.96-1.63	0.74	0.47-1.14
High school GED										
(versus < high school GED)	0.95	0.70-1.27	0.95	0.76-1.19	1.25	0.98-1.58	1.04	0.82-1.30	0.72	0.51-1.03

NOTE: OR = odds ratio, CI = confidence interval. Age is used as a continuous variable.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

TABLE 4: Logistic Regression Model: As Perpetrators of Violence (N = 1,478)

	Ever Beaten Someone (n = 657)		Ever Shot Someone (n = 219)		Ever Robbed Someone (n = 267)		Ever Killed Someone (n = 45)		Ever Raped Someone (n = 14)		Ever Been Arrested (n = 940)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Chronic drug users (versus non-chronic drug users)	2.60***	2.04-3.30	4.81***	3.17-7.29	9.09***	5.72-14.45	2.70*	1.24-5.87	3.70	0.78-17.53	7.45***	5.82-9.54
Male (versus female)	3.25***	2.54-4.16	1.68**	1.22-2.31	2.13***	1.56-2.91	1.94	0.98-3.83	5.56*	1.19-25.64	2.38***	1.82-3.10
Age (by years)	0.96***	0.94-0.97	0.995	0.98-1.01	0.97**	0.96-0.99	1.01	0.98-1.05	0.92*	0.86-1.00	1.02*	1.00-1.03
Black (versus White)	1.40*	1.07-1.83	1.54*	1.07-2.21	1.36	0.95-1.95	1.08	0.55-2.14	7.59	0.93-61.88	0.96	0.71-1.29
Hispanic (versus White)	0.48***	0.36-0.65	0.78	0.52-1.18	1.32	0.92-1.91	0.50	0.22-1.17	3.90	0.45-33.96	0.84	0.62-1.16
Married (versus not married)	1.04	0.76-1.41	1.34	0.91-1.97	0.88	0.58-1.31	1.69	0.81-3.55	3.38	0.99-11.58	1.10	0.79-1.52
Lives in own house (versus elsewhere)	0.90	0.65-1.25	1.00	0.77-1.30	0.73	0.79-1.37	0.91	0.42-1.95	0.19	0.02-1.53	0.87	0.65-1.16
High school GED (versus < high school GED)	0.90	0.71-1.14	1.28	0.93-1.76	0.94	0.70-1.26	1.80	0.89-3.66	0.89	0.30-2.69	0.72*	0.55-0.93

NOTE: OR = odds ratio, CI = confidence interval. Age is used as a continuous variable.  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



TABLE 5: Logistic Regression Model: As Victims of Violence (N = 1,478)

	Ever Been Beaten (n = 814)		Ever Been Shot (n = 396)		Ever Been Robbed (n = 794)		Ever Been Raped (n = 294)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Chronic drug users								
(versus non-chronic drug users)	2.04***	1.64-2.54	2.69***	2.05-3.54	1.49***	1.20-1.86	2.52***	1.81-3.51
Male (versus female)	1.11	0.88-1.39	2.42***	1.86-3.15	1.18	0.95-1.47	0.06***	0.04-0.09
Age (by years)	1.00	0.99-1.01	1.01	0.99-1.02	1.02**	1.01-1.03	0.98**	0.96-0.99
Black (versus White)	0.71*	0.54-0.92	1.40*	1.04-1.88	0.46***	0.36-0.60	0.39***	1.44-2.46
Hispanic (versus White)	0.50***	0.38-0.66	0.94	0.68-1.29	0.52***	0.39-0.69	0.31***	0.29-0.58
Married (versus not married)	0.87	0.66-1.16	0.76	0.54-1.08	1.06	0.80-1.41	1.24	0.85-1.80
Lives in own house (versus elsewhere)	0.66**	0.51-0.85	0.86	0.63-1.17	0.92	0.71-1.18	0.57**	0.40-0.82
High school GED (versus < high school GED)	0.78*	0.62-0.98	0.74*	0.57-0.95	1.36**	1.09-1.70	0.76	0.56-1.04

NOTE: OR = odds ratio, CI = confidence interval. Age is used as a continuous variable.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

robbed ( $p < .01$ ). Interestingly, older participants, rather than the younger ones, were more likely to have ever been arrested ( $p < .05$ ) (Table 4).

Blacks were significantly more likely than Whites to have observed a shooting ( $p \leq .001$ ) or a murder ( $p \leq .001$ ) (Table 3) or to have beaten ( $p < .05$ ) or shot ( $p < .05$ ) someone (Table 4); yet, they were also significantly more likely to have been shot ( $p < .05$ ), beaten ( $p < .05$ ), or robbed ( $p < .05$ ) (Table 5). Hispanics were significantly less likely to have seen someone beaten ( $p < .001$ ), robbed ( $p < .001$ ), or raped ( $p < .05$ ) (Table 3); to have beaten someone ( $p < .001$ ) (Table 4); or to have been the victim of a robbery ( $p < .001$ ), beating ( $p < .001$ ), or rape ( $p < .001$ ) (Table 5).

Participants who had a high school GED were significantly more likely to be the victim of a robbery than those participants with less than a GED ( $p < .01$ ). In addition, those who had less than high school GED education were more likely to have been arrested ( $p < .05$ ) and to have ever been shot ( $p < .05$ ) (Table 4).

Participants who did not have a home of their own were more likely to be beaten ( $p < .01$ ) or raped ( $p < .01$ ) (Table 5). These findings indicated that although chronic drug use was a salient risk factor for involvement in violence, other demographic characteristics were important to understanding violence. In general, being a male, Black, and of younger age seems to be associated with perpetrating a violent act, and being older and not living in one's own home was associated with being a victim.

Because CDUs were more likely to be perpetrators, it was questioned whether they were also more likely to have been arrested, booked, and jailed. Although the data did not link arrests with specific criminal acts, the two drug use groups were compared on the total number of violent acts (as a perpetrator or a victim) and their arrest and jail history in the previous 12 months by gender (Table 6). Consistent with the findings from the logistic regression analysis, both male and female CDUs were involved in a higher incidence of violence than NCDUs, and CDUs on average were arrested more often and spent more days in jail than NCDUs. Interestingly, in both groups, females were more often victims of violent acts in the previous 12 months ( $p < .01$ ) (Table 3) than their male counterparts. It is also interesting that whereas male NCDUs on average experienced more arrests (not significant) and spent three times more days in jail ( $p < .05$ ) than female NCDUs in the previous 12 months, among CDUs, females were arrested more often than their male counterparts.



**TABLE 6: Total Number of Violent Acts, Arrests, and Days in Jail in the Previous 12 Months by Gender and Chronic Drug User Status**

	<i>Number of Times</i>							
	<i>As Perpetrator</i>		<i>As Victim</i>		<i>Arrested and Booked</i>		<i>Days in Jail</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Non-chronic drug users								
Male ( <i>n</i> = 296)	1.12	3.91	1.06	2.43	0.59	1.26	4.61*	14.09
Female ( <i>n</i> = 257)	0.86	2.05	1.93	8.05	0.52	1.01	1.42	4.31
Chronic drug users								
Male ( <i>n</i> = 550)	6.26	17.25	1.42	2.78	0.91	2.82	14.01	34.50
Female ( <i>n</i> = 376)	7.81	22.99	5.83**	15.90	1.17	4.18	13.35	28.75

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

## DISCUSSION

In this article, it was hypothesized that CDUs would be perpetrators of violence more often than NCDUs and conversely, that NCDUs would be victims of violence more often than CDUs. The analysis supported the first hypothesis, finding that CDUs were significantly more likely to perpetrate all violent acts under consideration. However, there was no evidence to support the second hypothesis, as CDUs rather than NCDUs were significantly more likely to be the victims and observers of all violent acts. Interestingly, several protective factors against violence were also highlighted by the analysis. A discussion and possible explanations for these results follow.

This study's findings are consistent with the literature, which has repeatedly found strong correlations between violence and individual drug users (Chaiken & Chaiken, 1990; Dawkins, 1997; Inciardi & Pottieger, 1994). More specifically, CDUs in this sample of out-of-treatment drug users were nine times more likely than NCDUs to have ever robbed someone, almost five times more likely than NCDUs to have ever shot someone, and more than twice as likely to have perpetrated all other violent acts, when controlling for other factors. Similarly, the results were also consistent with other studies that have found that those individuals who engage in criminal activity as perpetrators also experience a higher rate of victimization than those who are not involved in criminal activity (Goldstein, 1991; Inciardi et al., 1993; Lauritsen et al., 1991; Maher & Curtis, 1995). The CDUs in this sample were significantly more likely than NCDUs to be victims and observers of all violent



acts. This may be a reflection of the culture of violence that Goldstein (1985) has offered with his tripartite conceptual framework, which characterizes drug-related violence as involving psychopharmacological, economically compulsive, and systemic aspects of the relationship between drugs and violence. Goldstein's theory would suggest that simply being a part of the drug-using culture would increase the chances of a CDU becoming an observer, victim, or perpetrator of violence. CDUs may be appealing targets for victimization for several reasons. If CDUs are experiencing the psychopharmacological effects of illicit drugs, they may not be able to physically resist an offender. In terms of the economically compulsive aspect of Goldstein's theory, a perpetrator may also assume that CDUs are more likely than NCDUs to be carrying cash, drugs, or other valuables, particularly if they are in a known drug locale. If CDUs are attacked, they will be less likely to report the incident to authorities for fear of being prosecuted themselves or being labeled as an informant (Goldstein, 1985). It is likely that CDUs are often victimized by their own CDU counterparts, as our analysis demonstrated that overall, NCDUs experience less victimization than do CDUs.

Males were more likely than females to have ever committed four of the five violent acts measured, but they were also more likely than females to be the victims of a beating, a shooting, a stabbing, or a robbery. As in other reported findings (Irwin et al., 1995), females were significantly more likely to be the victims of rape or sexual assault, lending support to other studies reporting an association between sexual abuse and the high risk of entering a life of prostitution and alcohol and drug abuse (He, McCoy, Stevens, & Stark, 1998; Klein & Chao, 1995; Zierler et al., 1991). However, when the number of violent acts committed in the previous 12 months was analyzed, female CDUs in fact perpetrated more crimes than their male counterparts. Again, this may be explained by the systemic aspects of Goldstein's theory. Female CDUs, particularly those who may be raising children alone, may feel more pressure to meet the economic needs of their family through crimes such as robberies. They may also feel that they have to be more aggressive to gain the respect of their male counterparts. Female CDUs experienced almost three times as many crimes as victims during the previous 12 months, compared to their female NCDU counterparts. So it would seem the drug-using lifestyle is a double-edged sword, particularly for females. Although some of the results on gender differences were not significant, the trends indicate that female CDUs were not only at higher risk for violent acts than female NCDUs, they were also at higher risk than male CDUs.

The analysis found that Hispanics were less likely to be observers of beatings, robberies, and rape; less likely to be perpetrators of beatings; and less likely to be victims of beatings, robberies, and rape; suggesting that Hispanic



ethnicity may be a protective factor against violence. One possible explanation may be related to the acculturation process. The majority of the Hispanic (primarily Mexican American) drug use and violence literature suggests a greater likelihood of violence if one uses drugs (Valdez, Kaplan, Curtis, & Yin, 1995). New immigrants are only in the beginning stage of acculturation and thus may not have the level of stress associated with the acculturation process (Caetano et al., 2000; King et al., 1999; Vega et al., 1998). Therefore, they do not yet exhibit the levels of violence associated with the urban/poverty experience.

Also of interest is the fact that according to a Watts and Wright (1990) study of Mexican American adolescents, youths having higher socioeconomic status reported more violent behavior due to the stress of negotiating between the two cultures and loss of their ethnic identity. The study participants represent the converse. Hispanic CDUs from lower economic status communities may not be facing these acculturation pressures and may be less likely to be violent.

Moreover, immigration may in fact buffer the impact of urban poverty and violence when native cultural beliefs and behaviors are practiced in insular ethnic communities that provide a strong support network. We can only speculate here about the basis for the potential protective nature of Hispanic ethnicity, but this is an area that deserves considerably more research.

Living in one's own house or apartment was significantly protective against ever having been beaten or raped. It seems likely that if people have a stable living environment, they may be less likely to be exposed to these violent acts regardless of their drug-using status (Metsch et al., 1998).

It was also found that younger participants were more likely to have beaten someone and to have raped or have robbed someone, but they were less likely than older participants to have ever been arrested. Perhaps, the more time people spend on the street, the more likely they are to be arrested, whether it is for a violent crime committed or for some other behavior attributed to their drug use, such as possession or intent to sell drugs. Perhaps, this is a result of an ever increasingly violent society overall and the wider acceptance of violent acts by younger generations due to their increased exposure to violence on a daily basis.

Finally, it was also found that having a better education made people significantly more likely to be the victims of a robbery. Similarly, other literature has reported that having a higher education can, in fact, be a risk factor for becoming a victim of violence (Gielen et al., 1994). It is possible that those participants who are more academically educated may not be as street-smart as their less educated counterparts, thus making them more likely to be victims. It seems that among this sample of participants from similar socioeco-



conomic backgrounds, education does not play a significant role in protecting against exposure to violence. It may be that other factors that contribute to socioeconomic status, such as income and employment status, play a more critical role in determining involvement in violence.

The diversity and complexity of the drug-violence relationship may, at first, dissuade efforts to prevent violence and victimization, particularly among street CDUs. However, it may in fact create novel and promising opportunities for intervention efforts targeting CDUs. Intervention strategies can be developed that specifically focus on CDUs, particularly in light of their multiple roles as observers, victims, and perpetrators of violence. The sensitive and contextual nature of violence must be considered as the major underpinning of intervention development and implementation. It is imperative to train interventionists and facilitators to conduct interventions with sensitivity and compassion because of the delicate nature of violence, which requires a balance of both skill and insight. Observing or being a victim and/or perpetrator of violence has the potential to be traumatic, perhaps driving some individuals into further drug use. Individuals might be educated on alternative coping strategies to manage their stress and anxiety of living in a culture of violence. In addition, appropriate and detailed assessment instruments need to be developed. These assessment tools should address past experiences of violence, particularly childhood sexual and physical abuse, and how they relate to destructive adult behavior.

Goldstein's tripartite conceptual framework, linking the psychopharmacological, economically compulsive, and systemic aspects of the drug-violence relationship, tends to be supported by our analysis. The culture of violence is evidenced in our findings that being a CDU was a significant predictor of being an observer, perpetrator, or victim of most violent acts examined. The Goldstein model provided little guidance, however, in explaining differences in the linkages between the concepts for ethnicity or education, for example. Why might Hispanic ethnicity versus Black ethnicity be protective against violence? Is there something about the community context, the "system" in Goldstein's terms, that might explain our contradictory finding about higher levels of education being protective against violence?

## CONCLUSIONS

The results presented in this study support previously published reports documenting a notable connection between drug use and violence, particularly in terms of drug users as perpetrators of violent acts. However, results also support a relationship between drug use and the role of victim and



observer of violence, suggesting the utility of the Goldstein model viewing drug-violence relationships as a culture of violence. Prevention and intervention regarding violence within the drug-using population should be the subject of policy and program discussions: stable housing arrangements for drug users, prevention programs for young drug users, and risk reduction for female drug users may be important directions. Strategies targeted to the characteristics of populations most at risk as victims, observers, and perpetrators and to the types of violent acts in a community context should be considered to have a greater likelihood of success.

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